

MULTIMEDIA



UNIVERSITY

STUDENT ID NO

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MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2019/2020

MVR 2043 – SIMULATION SCRIPTING
(All sections / Groups)

2 MARCH 2020
2.30 p.m – 4.30 p.m
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This Question paper consists of 6 pages with 15 objective questions and 10 subjective questions only.
2. Answer **ALL** questions in section A and C. Answer **FIVE** out of **SEVEN** question in section B. All questions carry equal marks and the distribution of the marks for each question is given.
3. Please write all your answers in the Answer Booklet provided.

Section A: Objective Questions**(Total: 15 Marks)**

1. Which of the following are the benefits of Augmented Reality to brands and organizations?
 - I. Increases engagement and provides a richer user experience.
 - II. Increases perceived value of products and brands.
 - III. Mobile and hugely accessible due to mass consumers with smartphone
 - IV. Increases the advancement of smartphone camera technology
 - A. I only
 - B. I, II and III
 - C. I, II and IV
 - D. All of the above
2. _____ reality adds virtual digital objects to real life often through the camera on a smartphone.
 - A. Virtual
 - B. Mixed
 - C. Augmented
 - D. Physical
3. _____ reality could imply a complete immersion experience that shuts out the physical world.
 - A. Mixed
 - B. Augmented
 - C. Immersive
 - D. Virtual
4. _____ reality is the merging of real and virtual worlds to produce new environments and visualizations where physical and digital objects co-exist and interact in real time.
 - A. Mixed
 - B. Virtual
 - C. Augmented
 - D. Combined

Continued

5. A term to describe the extent to which a user can modify form and content of a mediated environment.
- A. Engagement
 - B. Richness
 - C. Interactivity
 - D. Mapping
6. HMD stands for?
- A. Head Made Display
 - B. Head Masked Display
 - C. Head Mounted Display
 - D. Head Mounted Detection
7. TRANSFORM, can be used for all except...
- A. Rotate an object
 - B. Transform the object colour
 - C. Move an object in space
 - D. Scale an object's size
8. What kind of variable that is accessible throughout the script but is unseen in the inspector window in Unity?
- A. Private
 - B. Local
 - C. Public
 - D. Hidden
9. In Unity3D, to hide a game object you have to use the following code?
- A. `gameObject.SetActive(hidden);`
 - B. `gameObject.SetActive = hidden;`
 - C. `gameObject.SetActive = false;`
 - D. `gameObject.SetActive(false);`
10. Which one of the following is **valid** Generic Function Definition in UnityScript?
- A. `T FuncName<T>();`
 - B. `function FuncName<T>(): T;`
 - C. `function FuncName.<T>(): T;`
 - D. `void FuncName<T>();`

Continued

11. NavMesh Agents requires a particular **Component** which is determined by a Vector3 typed variable and determines its end path. What is that component?
- A. Auto Braking
 - B. Radius
 - C. SetDestination
 - D. Acceleration
12. _____ are a common concept to all 3D applications, as they provide the means to set the visual appearance of a 3D model. From basic colors to reflective image-based surfaces?
- A. Physics
 - B. Navigation
 - C. Materials
 - D. Audio
13. Using the following you able to **change parent** of GameObject?
- A. `hudCamera.transform.parent = hudSelectedObject.transform;`
 - B. `hudCamera.transform.SettingParent(hudSelectedObject.transform);`
 - C. Both
 - D. None of the above
14. Which of the following is the shorthand for `Vector3.forward`?
- A. `Vector3(0,0,1)`
 - B. `Vector3(1,0,0)`
 - C. `Vector3(0,1,0)`
 - D. `Vector3(1,1,0)`
15. 'float currentSpeed;' is written in the script.
What is the argument to check if the currentSpeed is **more than 0**?
- A. `Debug.Log(currentSpeed);`
 - B. `If (currentSpeed >= 0)`
 - C. `void CheckCurrentSpeed(){}`
 - D. `if (currentSpeed > 0.0f)`

Continued

Section B: Subjective Questions**Answer any 5 (FIVE) questions ONLY.****(Total: 10 Marks)**

1. What is the difference between marker and markerless AR tracking?
(2 Marks)
2. Explain the procedure on how to make AR app with EasyAR and Unity?
(2 Marks)
3. Explain the difference between a Collider and a Trigger?
(2 Marks)
4. Define what is SLAM technology?
(2 Marks)
5. Mention what is the function of Inspector in Unity 3D?
(2 Marks)
6. Define what is Object Pooling?
(2 Marks)
7. How to enabling Unity VR support?
(2 Marks)

Section C: Subjective Questions**Answer all questions.****(Total: 15 Marks)**

1. A few commons variables type that being used in C# scripts are int, float, bool and string. Explain the variables types below.
(4 Marks)
 - i. int
 - ii. float
 - iii. bool
 - iv. string

Continued

2. Write down C# script to reset a Game Object y-position to 0 when it's y-position exceed the assigned float name yPosLimit. Kindly fill in with the code provided below.

(4 Marks)

```
using UnityEngine;
using System.Collections;

public class SectionCQ2 : MonoBehaviour {

    GameObject cube;
    Vector3 resetPos;

    //declare a float

    void Start () {
        //assign a value to the float
    }
    void Update () {
        cube.transform.Translate(0, 1*Time.deltaTime, 0);
        //reset the cube y-position here with condition
    }
}
```

3. Write the required **function** that does the following: (7 Marks)
- Finds a GameObject by name "SomeGuy" and returns it.
 - Get the C# component by name "GameManager" and disable it.
 - Hide a GameObject by name "Cube" with delay of 2 seconds when player press a button.

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